Opus CCC

By Gilbert Whitley, F.R.Z.S.
(Contribution from the Australian Museum, Sydney)

(Figures 1-7.)

Family GALAXIIDAE.

Genus GALAXIAS Cuvier, 1816.

GALAXIAS ORNATUS Castelnau.

(Figure 1.)

Galaxias ornatus Castelnau, Proc. Zool. Acclim. Soc. Vict. ii, May 10, 1873, p. 153. Cardinia Creek, Victoria. Holotype in Paris Museum. *Id.* Macleay, Proc. Linn. Soc. N. S. Wales vi, 1881, p. 237; Descr. Cat. Austr. Fish. ii-1882, p. 173. *Id.* Lucas, Proc. Roy. Soc. Vict. (2) ii, 1890, p. 36 (listed). *Id.* Regan, Proc. Zool. Soc. (Lond.) 1905, ii (1906), p. 381. Type redescribed. *Id.* Whitley, Rec. Austr. Mus. xx, 1939, p. 268 (wrongly regards *G. pusillus* as a synonym). *Id.* Butcher, Freshwater Fish. Vict., 1946, p. 9 (listed).

I am grateful to Mademoiselle Gisele Mauger for the accompanying illustration of the unique holotype of Castelnau's species, which is No. A.5225 in the Museum national d'Histoire naturelle, Paris. The specimen is said to be "en aussi mauvais etat," is 95 mm. in standard length and has D. 9; A. 10; P. 15; V. 7 and 16 principal caudal rays. This formula differs slightly from those given by Castelnau and Regan.

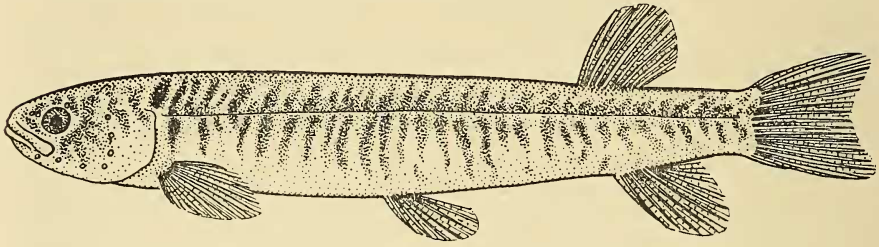

Figure 1.—Mountain Trout, *Galaxias ornatus*. Holotype from Victoria. Mlle. Gisele Mauger del.

GALAXIAS OCONNORI Ogilby.

(Figure 2.)

Galaxias oconnori Ogilby, Mem. Qld. Mus. i, 1912, p. 33. Lyra, south Queensland. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 133 (listed). *Id.* Duhig, Proc. Roy. Soc. Qld. xlii, 1931, p. xvi (melanosis & trematode). *Id.* Whitley, Rec. Austr. Mus. xix, 1933, p. 61, pl. xii, fig. 3 (holotype figured.)

Lyragalaxias oconnori Whitley, Vict. Nat. lii, 1935, pl. iii, fig. 5.

Seven specimens (Austr. Mus. regd. Nos. I.13459, IB.756 and IB.3278) from Rawdon, Rylstone, Cudgegong River, 18 Dec. 1911, and two (IB.755) from the junction of the Namoi and Barwon Rivers were received many years ago from Mr. D. G. Stead. The largest (65 mm. in standard length, No. IB.3278 from Rylstone), figured here, has the ventral origin nearer tip

of snout than base of caudal, which is the case in three other specimens, but another example has the ventral origin equidistant from those two points, and the majority have the ventrals nearer base of caudal than tip of snout as in typical *oconnori*.

New record for New South Wales.

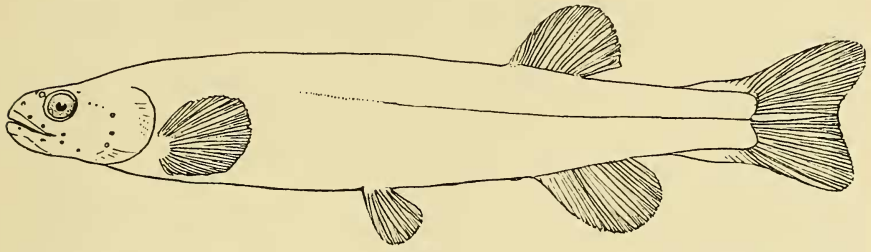

Figure 2.—Native Trout, *Galaxias oconnori*, from New South Wales.
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Family SYNGNATHIDAE.

Genus HISTIOGAMPHELUS McCulloch, 1914.

HISTIOGAMPHELUS MERACULUS Whitley.

(Figure 3.)

Histiogamphelus meraculus Whitley, Austr. Zool. xi, 3, Feb. 11, 1948 p. 271. City Beach, near Perth, Western Australia.

Here figured for the first time from the holotype, kindly lent for the purpose of illustration by Mr. L. Glauert, Director of the Western Australian Museum, Perth.

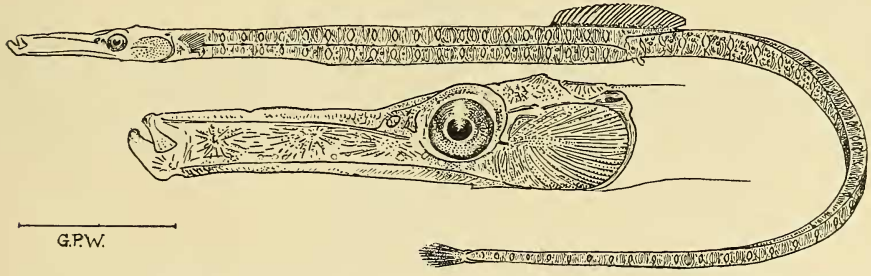

Figure 3.—Pipefish, *Histiogamphelus meraculus*. Holotype from Western Australia.
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Family SOLENICHTHYIDAE.

Genus SOLENICHTHYS Bleeker, 1865.

Solenichthys Bleeker, Ned. Tijdschr. Dierk. ii, 1865, p. 183. Logotype, *Solenostoma paradoxus* Lacepede = *Fistularia paradoxa* Pallas. *Id.* Whitley, Proc. Roy. Zool. Soc. N. S. Wales 1951-2 (1953), p. 30 (refs., synonymy and list of species).

SOLENICHTHYS RACEKI, sp. nov.

(Figure 4.)

Head (38 mm.) 2.4, depth of body (18) 5.2, of caudal peduncle (6) 15.6 in standard length (94), or 3, 6, and 20 in total length respectively. Eye (4) 9.5, interorbital (4) 9.5, snout (27) 1.4 in head. Depth of snout (9) 3 in its length. Length of caudal peduncle less than one-third of base of soft dorsal. Predorsal length 54 mm.; length of pectoral, 3.5; of ventral, 26; longest anal ray, 4; anal base, 9.

Head and body strongly compressed, widest at interorbital. Belly cultrate behind anal fin. Jaws toothless, premaxillaries ending in two spines superiorly. Maxillary (5 mm.) greater than interorbital, with concave posterior margin. Upper part of snout (especially mesethmoid) and lower sides of head elevated into papery crests; most of head-bones sculptured and with serrated ridges. Nostrils large, with about 15 exposed radiating laminae. Three main opercular keels radiate from behind eye. Gill-openings wide; isthmus very narrow. A median scute behind isthmus and two keeled rings just before ventral fins; a bony pre-dorsal ridge. Rings on body 29 between head and tail fin; of these, 5 are before first dorsal, 5 in a mediolateral row between first dorsal and level of vent (with 11 or 12 scutes above and below them), and about 14 from vent to beginning of caudal fin. First dorsal over 1½ scutes, second dorsal over about 8; anal under 5 plates.

D. v/?; A. 20; P. 27; V. 10; C. 16.

Dorsal base elevated. Fifth dorsal spine longest: however, the dorsal fins appear to be abnormal (probably injured and healed), the ends of the spines being curled and much of the second dorsal missing. Second dorsal and anal about as high as eye-diameter. Ventrals not united to one another or to abdomen, only their upper and lower rays simple. Ventrals, caudal and snout subequal in length.

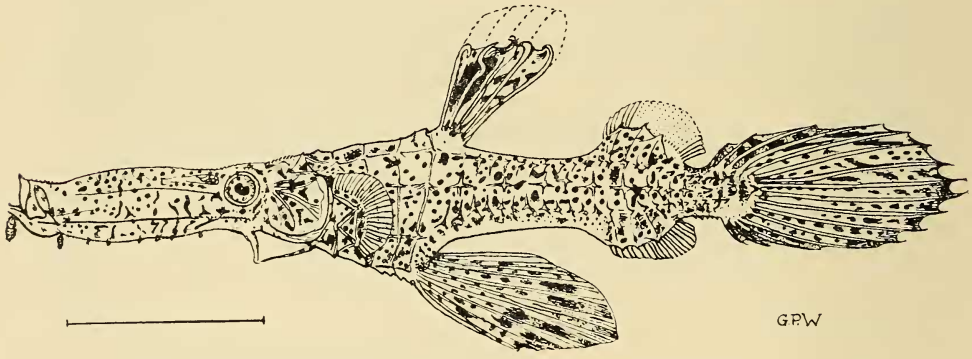

Figure 4.—Ghost Pipefish, *Solenichthys raceki*. Holotype from New South Wales. Dorsal fins restored where lines are dotted.

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Colour green in life with dark blotches on head, body and fins (except pectorals, second dorsal and anal which are plain). After death and preservation, brownish yellow with brown to blackish markings as figured, the dark blotches being largest and most conspicuous on first dorsal and caudal fins. Eye reddish. Pink edges to first dorsal fin, upper and lower surfaces of caudal peduncle, ventral and caudal fins. Pink barbel-like tags below snout and caudal peduncle.

Described and figured from the holotype, a specimen 120 mm. or 4¾ inches in total length. Australian Museum regd. No. IB.3300.

Loc.—Off Broken Bay, New South Wales; hiding amongst weed from daytime prawn-trawl, 5 to 7 fathoms, 27 January 1955. Collected by Dr. A. A. Racek of the State Fisheries Branch, Chief Secretary's Dept., Sydney.

The new species is distinguished from its congeners by its coloration, very deep snout, the W-shaped ridges down pectoral base, the deep caudal peduncle, ventrals equalling snout in length, the ten ventral rays, and in the disposition of the scutes on the body.

It is evidently closest to *S. paegnius* Jordan & Thompson (Mem. Carneg. Mus. vi, 4, Sept. 1914, p. 235, as *Solenostomus*) from Japan, differing in proportions and fin-counts, thus:

A. Length of caudal peduncle, measured from last anal ray to middle caudal rays, 4.75 in head. Ventral rays eight ..... *paegnius*

AA. Caudal peduncle 3.5 in head. Ventral rays ten ..... *raceki*, sp. nov.

From all other species (*paradoxus, cyanopterus, brachyurus, armatus, bleekeri, laciniatus, phantasticus* and *leptosomus*) the deep snout separates *raceki*.

The male "*Solenostomus cyanopterus*" beautifully figured by Jungersen (D. Kgl. Danske Vidensk. Selsk. Skr., 7 Raekke, viii, 5, p. 310, pl. III, figs. 10-11; pl. vi, figs. 2-3 and 6-9; and pl. vii, figs. 3-6) from Japan is evidently *Solenichthys paegnius*. It has caudal peduncle 5 in head, ventral rays seven and a deep snout. My specimen most resembles his female E in numerical characters. I am grateful to the Royal Society of South Australia for a loan of the volume in which Jungersen's paper was published.

Family GERRIDAE.

Genus PAROCHUSUS Whitley, 1930.

PAROCHUSUS CHEVERTI (Alleyne & Macleay).

Gerres cheverti Alleyne & Macleay, Proc. Linn. Soc. N. S. Wales i, Feb. 1877, p. 272, pl. vii, fig. 1. Cape Grenville, Queensland.

One specimen, 6¼ inches long, from Darwin (Austr. Mus. regd. No. IB.3366). New record for the Northern Territory.

Family ACANTHURIDAE.

Genus CYPHOMYCTER Fowler & Bean, 1929.

CYPHOMYCTER TUBEROSUS (Lacepede).

Naso tuberosus Lacepede, Hist. Nat. Poiss. iii, 1802, pp. 105 & 111, pl. vii, fig. 3. Mauritius.

Naseus johnstonei Ramsay, Austr. Mus. Rept. 1875 (1876), p. 4. *N.n.*

Naso (*Cyphomycter*) *tuberosus* Fowler & Bean, Bull. U.S. Nat. Mus. 100, viii, 1929, p. 273, fig. 19 (refs. & synon.). *Id.* Whitley, Mem. Qld. Mus. x, 1930, p. 18.

Dr. R. Catala sent me a kodachrome photograph of a specimen from the reef off Noumea, Feb. 1955; new record for New Caledonia. Apart from specimens from Mauritius and New Guinea in the Australian Museum, there is a photograph of the chirotype (an adult female) of *Naseus johnstonei* Ramsay, a hitherto unrecorded synonym of this species; it was 21½ inches long, has a humped back, and came from Port Moresby, Papua.

Family SEMIONOTIDAE.

LEI, gen. nov.

Orthotype, *Leiolepis kohlmanni* Heller (Geol. Bl. NO.—Bayern ii, 1, 1952, p. 25, pl. ii) = *Lei kohlmanni*.

A new name, of masculine gender, to replace *Leiolepis* Heller, *loc. cit.*, which is preoccupied by *Leiolepis* Cuvier (Regne Anim. ed. 2, ii, 1829, p. 37) and of several later authors in Reptiles and Fishes.

Family CHAETODONTIDAE.

Genus CHELMON Cloquet, 1817.

CHELMON ROSTRATUS (Linne).

(Figure 5.)

The Beaked Coral Fish, *Chelmon rostratus* (or, less likely its relative, *Forcipiger longirostris*) appears to be the species of fish represented on an interesting aboriginal shield in Mr. Melbourne Ward's Gallery of Natural History and Native Art, Medlow Bath, where he kindly allowed me to prepare the accompanying figure when I was his guest on a brief visit to the Blue Mountains. It is registered No. H.1414 and came from Raffles Bay, Northern Territory. The shield is 2 feet long, 5½ inches wide, nearly 2 inches in depth, slightly curved from end to end (the inner side, with sunken hand-grip, here shown being concave) and the outer sides are

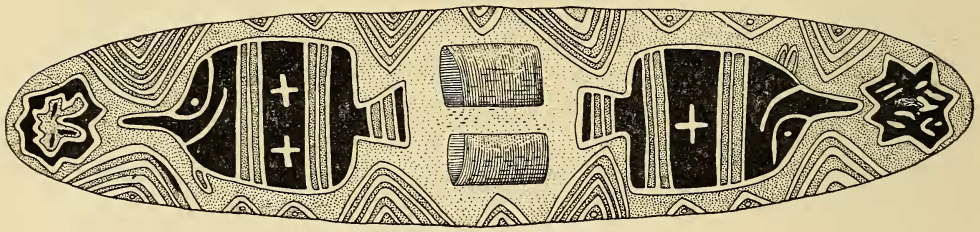

Figure 5.—Aboriginal shield from the Northern Territory with Beaked Coral Fish, Starfish, etc. in design.
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strongly convex. Mr. Frederick McCarthy, anthropologist at the Australian Museum, says the shield is of a type not native to the Northern Territory but more like certain Kimberley (W.A.) forms, but the decoration is unlike any in the Australian Museum and might be due to non-aboriginal influence. The outlines are incised and white as shown in the diagram, stippled areas are red and black ones black, the design and execution showing a fine degree of craftsmanship. The reversal of one fish might indicate its habit of swimming upside-down, as *Forcipiger* sometimes does. Besides the fish and boomerang-shaped waves (?) there are two starfish (*Oreaster nodosus*). These are not greatly conventionalized, but on the other side of the shield there are two hammerhead sharks (*Sphyrna*) which are ornamented with scrolls and not naturally drawn. Altogether a unique piece of native art.

The same species of beaked coral fish is represented in a wood carving made at Goulburn Island, Arnhem Land, and illustrated by Axel Poignant (Sydney Morning Herald newspaper, May 28, 1955, p. 10, fig.).

Family ATHERINIDAE

Genus ATHERINOSOMA Castelnau, 1872.

ATHERINOSOMA LINCOLNENSIS Whitley.

(Figure 6.)

Atherinosoma microstoma lincolnensis Whitley, Austr. Zool. x, 1941, p. 17. Port Lincoln, South Australia.

The holotype (Austr. Mus. regd. No. IB. 662) is here figured for the first time; it was collected before May 1941, but whether in fresh or salt water I have been unable to ascertain. The large eye is characteristic, also the shallow caudal peduncle and slender form, apart from the fin and scale-counts.

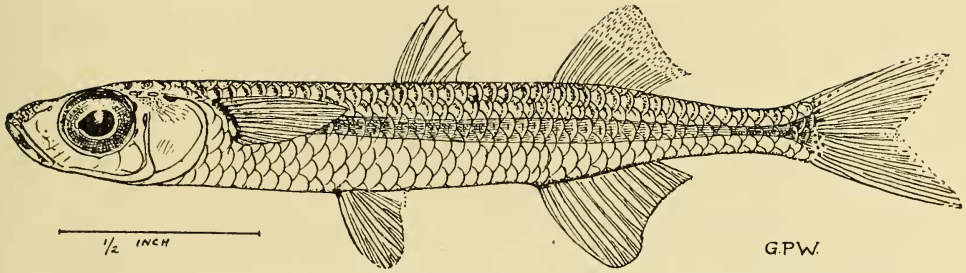

Fig. 6: Hardyhead, *Atherinosoma lincolnensis*. Holotype from South Australia.

ATHERINOSOMA TROPICALIS Whitley.
(Figure 7.)

Atherinosoma (*Taeniomembras*) *tropicalis* Whitley, Rec. Austr. Mus. xxii, 1948, p. 87. Whitsunday Passage, Queensland.

For comparative purposes, I offer here an original figure of the holotype (Austr. Mus. regd. No. IA. 1553) of this north Queensland species. This has a robust body, with more than 40 lateral scales; pectoral rays 17 and 20 predorsal scales.

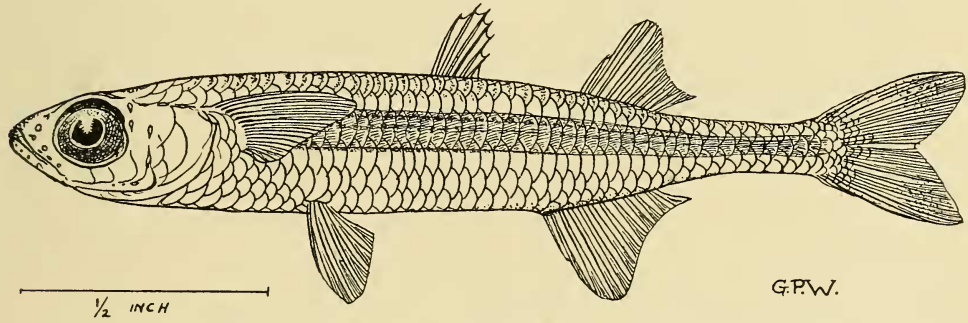

Fig. 7: Hardyhead, *Atherinosoma tropicalis*. Holotype from Queensland.

Genus CRATEROCEPHALUS McCulloch, 1912.

CRATEROCEPHALUS ANTICANUS, sp. nov.

New name for *Craterocephalus edelensis* Whitley (Proc. Linn. Soc. N. S. Wales lxviii, 1943, p. 135, description only not synonymy or figure), not *Atherinichthys edelensis* Castelnau, 1873, which is as now restricted a freshwater species from the Swan River system.

A Western Australian marine atherine from the North-west Cape to Abrolhos area in which the vent is situated almost as far forward as the bases of the ventral fins. A useful diagnostic feature is a dark streak along each side of chin. The premaxillary processes are slender and longer than pupil; there are large scales below pectoral base, 3½ scales from there to chest; the body-cavity ends bluntly just in front of anal origin, not entering first haemal arch; none of haemal spines or hypophyses broadened.

Holotype (Austr. Mus. regd. No. IB.282) from Shark's Bay and a number of paratypes in the Australian and West Australian Museums.

Nearest *C. capreoli* Rendahl but with vent farther forward and slightly different proportions.

anticanus, from Latin *anticus*, forward, and *anus*, vent.